

The specific name proposed alludes to the length of the inferior appendage of the male which acts as an opposable organ (hence *pollcx*) in grasping the female.

The figures illustrating the appendages of the abdomen and the genitalia have been drawn from under the compound microscope with the camera lucida. The wings were photographed to as large a scale as our camera permitted, a blue print made from the negative, the veins inked with waterproof black ink, the blue background washed to white with ammonia water and "copy" thus obtained for the engraver.

Having very little literature on the Odonata accessible to me at present, I have asked Mr. E. B. Williamson to look over the manuscript of this paper and correct it where necessary.

Cartago, Costa Rica, October, 1909.

Dr. Calvert's interesting new species seems to be most closely related to *Ncocordulia batesi* Selys, recorded by Martin, from Brazil and Ecuador. In *batesi* the superior appendages, as in *longipollcx*, are without any promiencences but are conspicuously dilated apically as opposed to the subuniform thickness of the appendages throughout in *longipollcx*; and the inferior appendage is shorter than the superiors, not greatly exceeding them as is the case in *longipollcx*. No changes have been made in Dr. Calvert's manuscript. E. B. W.

The Bees of Virginia—*Prosopis*, *Sphecodes*, *Osmia*.

By JOHN H. LOVELL, Waldoboro, Maine.

The bees of the southern states are so imperfectly known that collections from any part of this region possess more than usual interest. Some months ago I received from Dr. Nathan Banks for determination a collection of bees largely from Virginia belonging to the genera, *Osmia*, *Sphecodes* and *Prosopis*. Only a few species of *Osmia* and *Prosopis* have been recorded from this state, while the genus *Sphecodes* is wholly unknown from this area. A list of the species is as follows:

PROSOPIS.

Of the five species of *Prosopis* enumerated in this paper four occur also in the northeastern states, while one, *P. minyra*, is described as new. If specimens of *Prosopis* with yellow markings are left too long in the cyanide jar the yellow marks change to red. Even dried specimens, if exposed to the action of cyanide of potassium, will undergo a similar change. The yellow coloration of some species of wasps under these conditions also becomes red. Such artificial color changes, if unknown, might easily lead to mistakes in identifications.

***Prosopis pygmaea* Cr.**

♀. Falls Church, Va., May 30, on flowers of *Castanea pumila*, June 22, July 6, on flowers of *Ceanothus*, N. Banks.

***Prosopis verticalis* Cr.**

As the female has never been described it is deemed desirable to give the more important characters:

♀.—Length about 6mm., larger than the male which it closely resembles. Deep black; the bow-shaped marks on each side of the face and the tubercles are yellow (the collar and tegulae are dark); the anterior and intermediate legs wholly black, the posterior legs have the tibiae yellow at base. Head longer than broad, the clypeus is distinctly but sparsely punctured, the face closely and evenly punctured. Mesothorax opaque, the punctures small and very evenly distributed. Wings nearly hyaline, stigma and nervures fuscous. Enclosure of metathorax well-defined, irregularly and finely reticulated (in the male the rugae are more nearly parallel). The first abdominal segment is smooth and shining, with patches of white pubescence on the apical lateral margins.

Two females collected at Falls Church, Va., on May 24; one male at Falls Church, Va., May 24, N. Banks.

***Prosopis minyra* n. sp.**

♂.—Length about 4 mm. The clypeus, supraclypeus and the sides of the face are yellow; the upward extensions of the lateral face marks are short and obliquely truncate; two spots on the collar and the tubercles, the anterior tibiae in front, the intermediate tibiae at base and apex (slightly), the posterior tibiae at base and all the tarsi, yellow. Head about as broad as long, the face narrowed below, the punctures of the face and mesothorax are close and small. Antennae black, the scape normal, the flagellum is fuscous in front, light brown behind. Wings nearly hyaline, iridescent, the nervures and stigma are fuscous, the

tegulae nearly dark brown. Enclosure of metathorax semicircular, strongly pitted. The first abdominal segment smooth and shining, the compound microscope shows that it is nearly impunctate in the center and sparsely and very finely punctate on the sides.

Type from Church Bridge, Va., June 9, N. Banks. About the size of *P. pygamaea* from which the form of the face marks and the spots on the collar easily distinguish it. The face marks resemble those of *P. ziziae*, from which it differs in its smaller size and the absence of yellow spots on the scapes and tegulae. The shade of yellow of the markings is not stated in the description as they had been reddened in the cyanide jar; but, so far as can be inferred, they were lemon yellow.

Prosopis ziziae Robt.

♀. Falls Church, Va., May 20, May 30, on flowers of *Castanea pumila*, June 14, July 6, N. Banks.

♂. Falls Church, Va., June 2, on flowers of *Castanea pumila*, June 9, N. Banks, also two specimens from Ithaca, N. Y.

Prosopis modesta Say.

As Say's type is no longer in existence and his description is very brief, the correct identification of this species has been regarded as doubtful. In another paper I hope to show that Say's species can be determined with a high degree of certainty. I have examined the common species of Indiana (the probable type locality) belonging to this genus, and have obtained figures and new descriptions of *P. affinis* Sm. prepared by Col. Bingham from the types in the British Museum, with which *P. modesta* has frequently been confounded. The name has been so long and so widely used that it is desirable to retain it if possible.

♀. Falls Church, May 14, May 30, on *Castanea pumila*, June 2, on *Castanea pumila*, June 14, July 5 on *Ceanothus*, July 16, Aug. 5; Great Falls, Va., June 7, July 17; Church Bridge, Va., June 9; Glencarlyn, Va., July 2, July 28 on *Ceanothus*; Washington, D. C., July 21; Sea Cliff, N. Y., collected by Nathan Banks.

♂. Falls Church, Va., May 30 on flowers of *Castanea pumila*, June 7, June 24, June 27, July 5, July 20, Aug. 2; Great Falls, Va., May 22, June 7. Sea Cliff, N. Y.; June, N. Banks.

The first abdominal segment is usually finely and sparsely punctured, but occasionally on the center or disc the punctures are very few in number and cannot be clearly distinguished without the aid of the compound microscope, but on the sides of the segment they still remain numerous. The color of the markings is pale or lemon yellow.

SPHECODES.

As it is necessary to determine whether the mandibles of species of *Sphecodes* are simple or dentate they should be spread when the specimens are collected. If this is omitted it is often necessary to relax them, and the moisture of the relaxing jar may largely increase the area of black coloration upon the abdomen. The color of the abdomen should, of course, always be carefully noted and recorded before the specimens are placed in the jar.

Sphecodes dichrous Sm.

♂. Falls Church, Va., Aug. 2 on flowers of sumach; Great Falls, July 12, N. Banks.

Sphecodes obscurans Lov. and Ckll.

♀. Sea Cliff, N. Y., N. Banks.

Sphecodes heraclei Rob.

♀. Falls Church, Va., July 17, N. Banks.

♂. Falls Church, Va., July 17, N. Banks.

This species is easily identified by the tubercle on the vertex of the head.

Sphecodes confertus Say.

♀. Great Falls, Va., May 22; Falls Church, Va., June 2; also Ithaca, N. Y., N. Banks.

Sphecodes ranunculi Robt.

♀. Falls Church, Va., June 2, June 23 on flowers of *Ceanothus*, N. Banks.

♂. Falls Church, Va., May 10, May 24, N. Banks.

***Sphecodes mandibularis* Cr.**

♀. Sea Cliff, N. Y., N. Banks.

***Sphecodes illinoiensis* Robt.**

♀. Glencarlyn, Va., May 9, N. Banks.

***Sphecodes stygius* Robt.**

♀. Falls Church, Va., July 16, July 17 on flowers of *Angelica villosa*, Aug. 5, N. Banks.

***Sphecodes banksii* n. sp.**

♀.—Length 3-4 mm. Head and thorax black; abdomen red, the apical segments clouded with black. Head about as broad as long; mandibles simple, yellowish-red the apices darker; face finely and densely punctured, clothed with thin, white hair; labrum sometimes reddish, clypeus smooth and shining almost impunctate; antennae brownish-black, flagella reddish brown. Mesothorax smooth and shining, with small, sparse punctures; tubercles red. Enclosure of metathorax well-defined, with parallel ridges. Wings hyaline faintly tinged with fuscous, iridescent, nervures and stigma fuscous; tegulae reddish testaceous; second submarginal cell narrow, the sides nearly parallel. Legs reddish-brown, clothed with silvery white hair. Abdominal segments 1-3 light or yellowish-red, the apical segments not deeply shaded with black; basal segment with a few fine punctures, the other segments finely and closely punctured all over except on the apical margins.

The description is based on four female specimens from Sea Cliff, Long Island, N. Y., N. Banks. This is a very distinct form and I know of no other species in North America with which it can be compared. The species is dedicated to Dr. Nathan Banks.

***Sphecodes distolus* n. sp.**

♀.—Length 6 mm. Head and thorax black; abdomen largely red, the apical segments only partially black. Head broader than long; mandibles red with darker apices, bidentate; clypeus without a median suture, with small rather close punctures; face very finely and densely punctured; antennae black, flagella reddish brown, joints 3 and 4 nearly equal. Mesothorax finely and densely punctured, wings hyaline, stigma, nervures and tegulae pale fuscous, the first transverse cubital nervure is absent and there are only two submarginal cells, the first of the two cells is nearly three times the length of the second, the venation (except the radial nervure) beyond the basal nervure is subobsolete. The enclosure of the metathorax is well-defined, the center smooth and shining

with about three ridges on each side. The trochanters are largely red, the femora largely black, all the tibiae and tarsi are red. Abdominal segments 1-3 are chestnut red, segment 4 is black in the center, segment 5 largely black; segment 1 is nearly impunctate, with a few, fine, widely scattered punctures; the other segments have very fine, shallow punctures except on the apical margins.

One specimen from Great Falls, Va., July 17, N. Banks. *S. Distolus* differs from *S. (Dialonia) antennariae*, which also has only two submarginal cells, in its larger size, dentate mandibles, black mesothorax with coarser punctuation, venation and color of abdomen.

OSMIA.

Osmia lignaria Say.

♀. Falls Church, Va., April 18; Glencarlyn, Va., May 4, N. Banks. ♂. Falls Church, Va., April 18, N. Banks.

Osmia melanotricha Lov. and Ckll.

♀. Glencarlyn, Va., May 4; Great Falls, Va., June 25, *S. distolus* differs from *S. (Dialonia) antennariae*, which also been found in Colorado. The type locality is Maine.

Osmia pumila Cr.

♀. Great Falls, Va., May 22, June 7; Glencarlyn, Va., May 4, May 10, N. Banks.

♂. Falls Church, Va., April 26 on flowers of *Waldsteinia*; Glencarlyn, Va., May 4, N. Banks.

Osmia purpurea Cr.

♀. Falls Church, Va., May 24, June 2, June 24, N. Banks. This species, says Cresson, may be readily distinguished by the dark purple coloring and the narrow fasciae of the abdomen. The mandibles are 4-dentate.

Osmia rustica Cr.

♂. Falls Church, Va., May 24, June 2, N. Banks.

Osmia georgica Cr.

♀. Falls Church, Va., May 29, N. Banks.

ERRATUM.—IN ENT. NEWS, Vol. XX, No. 3, March, 1909, on page 124 for *S. nubilus* read *S. nephelotus*.